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Reflection-proof optical element - has transparent plastic base with  
fluorine-contg. organic polysiloxane-based thin film layer  
Patent Assignee: TORAY IND INC (TORA )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
JP 63021601	A	19880129	JP 86165531	A	19860716		198810 B

Priority Applications (No Type Date): JP 86165531 A 19860716

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
JP 63021601	A		9			

Abstract (Basic): JP 63021601 A

The reflection-proofed optical element is characterised by having,  
on (a) transparent plastic base with 1.52 or greater refractive index,  
(b) a fluorine-contg. organic polysiloxane-based thin film layer with  
thickness of 10-500 nm and refractive index at least by 0.02 lower than  
that of the plastic base.

The fluorinated polysiloxane is pref. a polymer of fluorinated  
organosilicon cpd. of general formula  $(R_1Q)SiXaY_3-a$  (I) and/or its  
hydrolysate. In (I)  $R_1$  is 1-20C fluorinated alkyl gp. which may have  
one or more ether or ester linkage(s); Q is bivalent organic gp.; X is  
lower alkyl; Y is halogen, alkoxy,  $RCOO-$  where R is hydrogen or lower  
alkyl. The plastic base may be undercoated with a transparent coating  
layer contg. fine particles of inorganic oxide and having a refractive  
index not lower than 1.52. The optical element is produced pref. by  
coating the plastic base, which may have an undercoating layer, with a  
liq. compsn. contg. (I) and/or its hydrolysate, followed by curing at  
elevated temps.

USE/ADVANTAGE - The optical element combines excellent  
reflection-proofness with high surface hardness and improved physical  
strength. It permits dyeing, and is applicable to sun glass use, etc.  
Title Terms: REFLECT; PROOF; OPTICAL; ELEMENT; TRANSPARENT; PLASTIC; BASE;  
FLUORINE; CONTAIN; ORGANIC; POLYSILOXANE; BASED; THIN; FILM; LAYER

Derwent Class: A26; A89; P81

International Patent Class (Additional): C08J-007/04; G02B-001/10

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): A06-A00D; A09-A02; A10-E04A; A12-B07; A12-L02A;  
A12-L03

Plasdoc Codes (KS): 0210 0229 0231 1306 1971 2020 2152 2198 2432 2437 2482  
2493 2499 2587 2592 2594 2595 2622 2629 2654 2660 2715 2726 3310 2851

Polymer Fragment Codes (PF):

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473 477 516 521 522 523 55- 551 560 561 567 57& 575 596 597 600 601  
619 622 649